CLAIMS

1. A method comprising:

   obtaining reference data that characterizes a media
   stream,

   obtaining altered data that characterizes said media
   stream after said media stream has traversed a channel
   that includes a network; and

   determining a quality of service of said channel on the
   basis of a comparison of said reference data and said
   altered data.

2. The method of claim **1**, wherein

   said reference data characterizes a feature of said
   media stream; and

   said altered data characterizes a feature of said media
   stream after said media stream has traversed said
   channel.

3. The method of claim **1**, wherein obtaining at least one of said
   reference and said altered data comprises applying a Sarnoff
   JND algorithm or an ANSI T1.801.03 algorithm.

4. The method of claim **2**, wherein determining a quality of
   service of said channel comprises comparing said first

reference data and said altered data.

5. The method of claim **1**, further comprising:

> obtaining network statistics associated with
>
> transmission on said channel; and
>
> correlating said network statistics with said altered
>
> data.

6. The method of claim **5**, further comprising selecting said network statistics from the group consisting of jitter, packet loss, and packet latency.

7. The method of claim **1**, further comprising selecting said channel to include:

> an encoder for creating an encoded representation of
>
> said media stream;
>
> a decoder for recovering said media stream from said
>
> encoded representation; and
>
> a computer network between said encoder and said
>
> decoder.

8. The method of claim **1**, wherein obtaining said reference data comprises:

passing said media stream through an encoder to generate an encoded signal;

passing said encoded signal through a decoder to generate a decoded media stream; and

passing said decoded media stream through a feature extractor to extract said reference data.

9. A system comprising:

a first feature extractor for generating reference data characterizing a media stream;

a second feature extractor for generating altered data characterizing said media stream after said media stream has traversed a channel that includes a network; and

an analyzer for comparing said reference data and said altered data to generate a transmission metric indicative of a quality of service.

10. The system of claim 9, further comprising a correlator in communication with said analyzer, said correlator being configured to correlate network statistics associated with said channel with said transmission metric.

11. The system of claim **10**, further comprising a network monitor in communication with said correlator, said network monitor being configured to collect said network statistics.

12. The system of claim **10**, wherein said correlator is configured to correlate statistics selected from the group consisting of: jitter, packet loss, and packet latency.

13. The system of claim **9**, wherein said first and second feature extractors are configured to extract media features using an algorithm selected from the group consisting of: the Sarnoff JND algorithm and the ANSI T1.801.03 algorithm

14. A computer-readable medium having software encoded thereon, said software comprising instructions for:

> obtaining reference data that characterizes a media stream,

> obtaining altered data that characterizes said media stream after said media stream has traversed a channel that includes a network; and

> determining a quality of service of said channel on the basis of a comparison of said reference data and said altered data.

15. The computer-readable medium of claim **14**, wherein

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said instructions for obtaining reference data include
instructions for generating reference data
characterizing a feature of said media stream; and

said instructions for obtaining altered data comprise
instructions for generating altered data that
characterizes a feature of said media stream after said
media stream has traversed said channel.

16. The computer-readable medium of claim **14**, wherein said
instructions for obtaining at least one of said reference and
said altered data comprise instructions for applying a Sarnoff
JND algorithm or an ANSI T1.801.03 algorithm.

17. The computer-readable medium of claim **15**, wherein said
instructions for determining a quality of service of said
channel comprise instructions for comparing said first
reference data and said altered data.

18. The computer-readable medium of claim **14**, wherein said
software further comprises instructions for:

obtaining network statistics associated with
transmission on said channel; and

correlating said network statistics with said altered
data.

19. The computer-readable medium of claim **18**, wherein said

software further comprises instructions for selecting said
network statistics from the group consisting of jitter, packet
loss, and packet latency.

20. The computer-readable medium of claim **14**, wherein said
software further comprises instructions for selecting said
channel to include:

> an encoder for creating an encoded representation of
> said media stream;

> a decoder for recovering said media stream from said
> encoded representation; and

> a computer network between said encoder and said
> decoder.

21. The computer-readable medium of claim **14**, wherein said
instructions for obtaining said reference data comprise
instructions for:

> passing said media stream through an encoder to generate
> an encoded signal;

> passing said encoded signal through a decoder to
> generate a decoded media stream; and

> passing said decoded media stream through a feature
> extractor to extract said reference data.